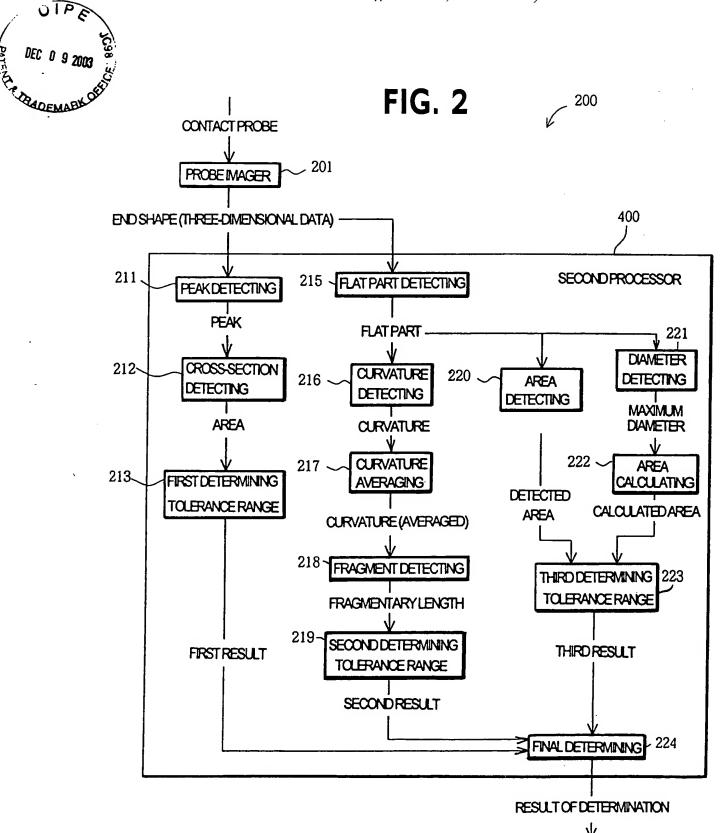
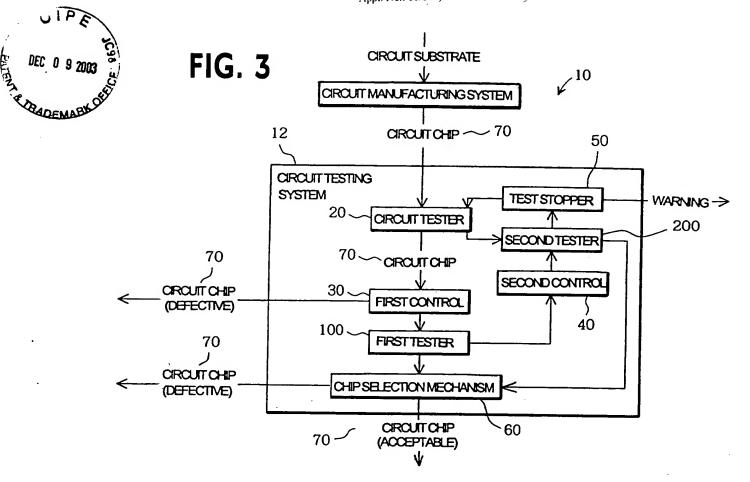
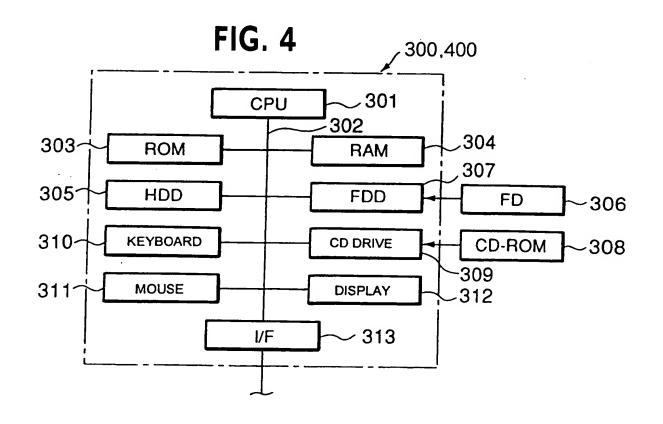
Title: PROBE TESTING METHOD AND APPARATUS FOR DETERMINING ACCEPTABLE/DEFECTIVE END SHAPE OF CONTACT PROBE THROUGH IMAGE **ANALYSIS** Inventor(s): Yoshihiro SASAKI, et al. Appl. No.: 10/644,071 70 FIG. 1 DEC 0 9 2003 **CIRCUIT CHIP** (CONTACT PAD) 101 PADSCANNER K 100 SURFACE SHAPE (THREE-DIMENSIONAL DATA) 300 111. 122 121 SURFACE AVERAGING RECESS SELECTING 115 SURFACE SHAPE (AVERAGED) REFERENCE RECESS STORING MEASURING 112 ACTUALLY REFERENCE PART EXTRACTING MEASURED RECESS COMPARING **FLAT PART** RECESS 123 113. .116 REFERENCE GENERATING RECESS ENLARGING REFERENCE SHAPE. RECESS (ENLARGED) .117 114 IMPRESSION DETECTING RECESS DETECTING IMPRESSION RECESS 118 SHAPE DETECTING POSITION, DEPTH \_119 FIRST PROCESSOR PROBE DETERMINING **RESULT OF DETERMINATION** 

Inventor(s): Yoshihiro SASAKI, et al. Appl. No.: 10/644,071

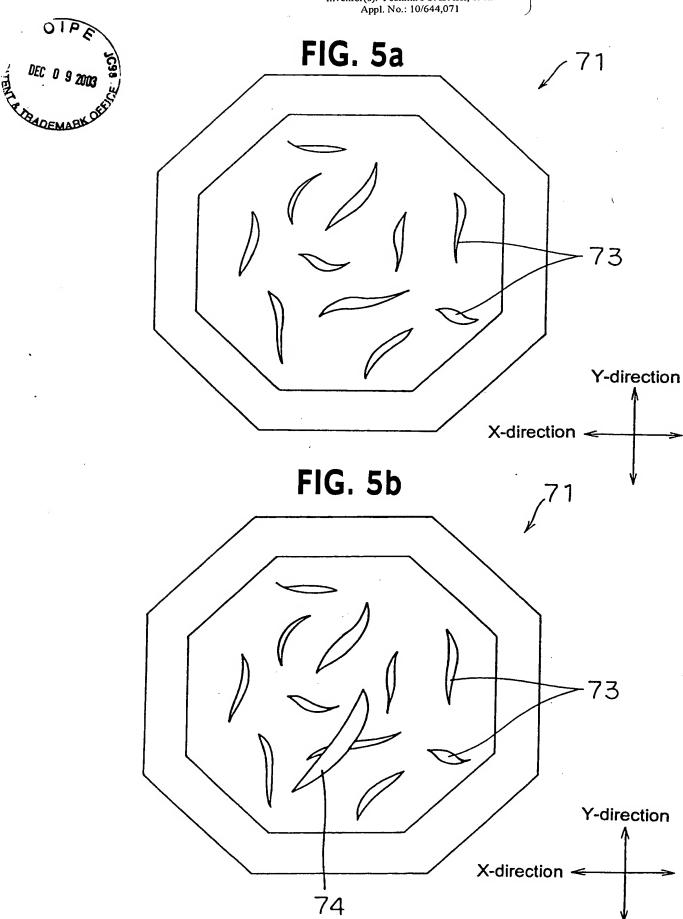


Inventor(s): Yoshihiro SASAKI, et al. Appl. No.: 10/644,071





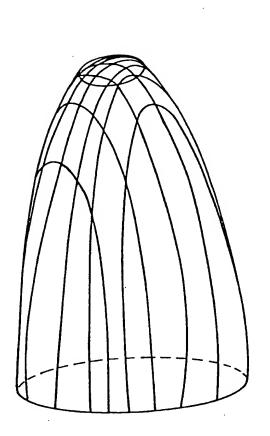
Title: PROBE TESTING METHOD AND APPARATUS FOR DETERMINING ACCEPTABLE/DEFECTIVE END SHAPE OF CONTACT PROBE THROUGH IMAGE ANALYSIS
Inventor(s): Yoshihiro SASAKI, et al.
Appl. No.: 10/644,071



Inventor(s): Yoshihiro SASAKI, et al. Appl. No.: 10/644,071



## FIG. 6

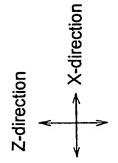


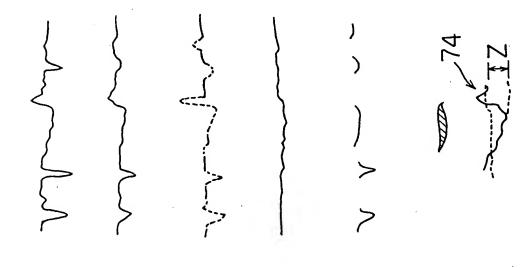
Z-direction

X-direction Y-direction

ANALYSIS
Inventor(s): Yoshihiro SASAKI, et al.
Appl. No.: 10/644,071







Inventor(s): Yoshihiro SASAKI, et al. Appl. No.: 10/644,071

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FIG. 8a

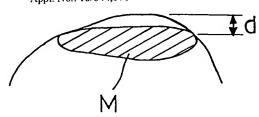


FIG. 8b

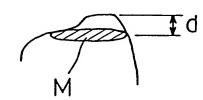


FIG. 9a

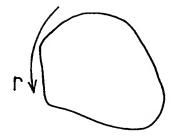


FIG. 9b

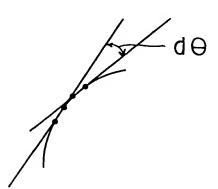
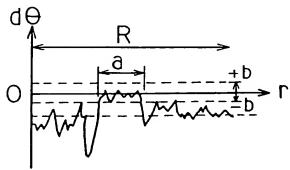


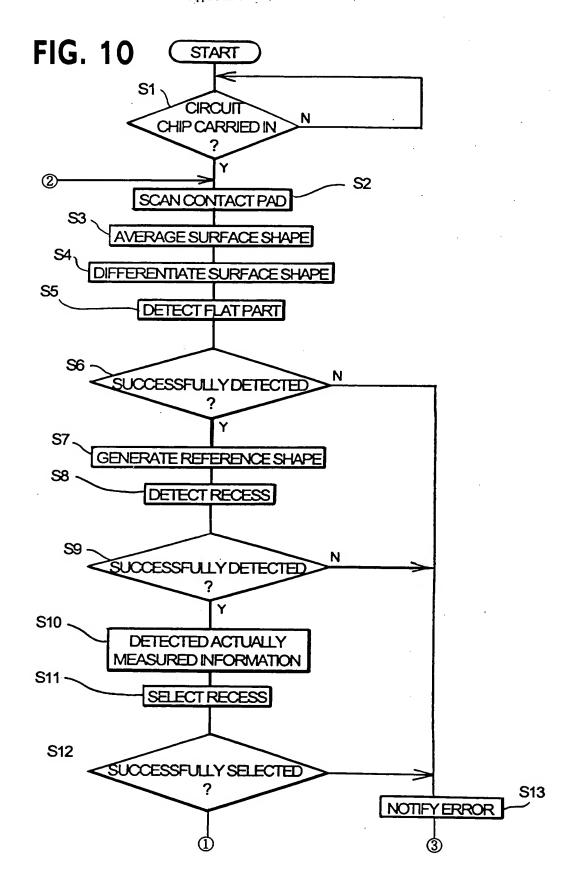
FIG. 9c



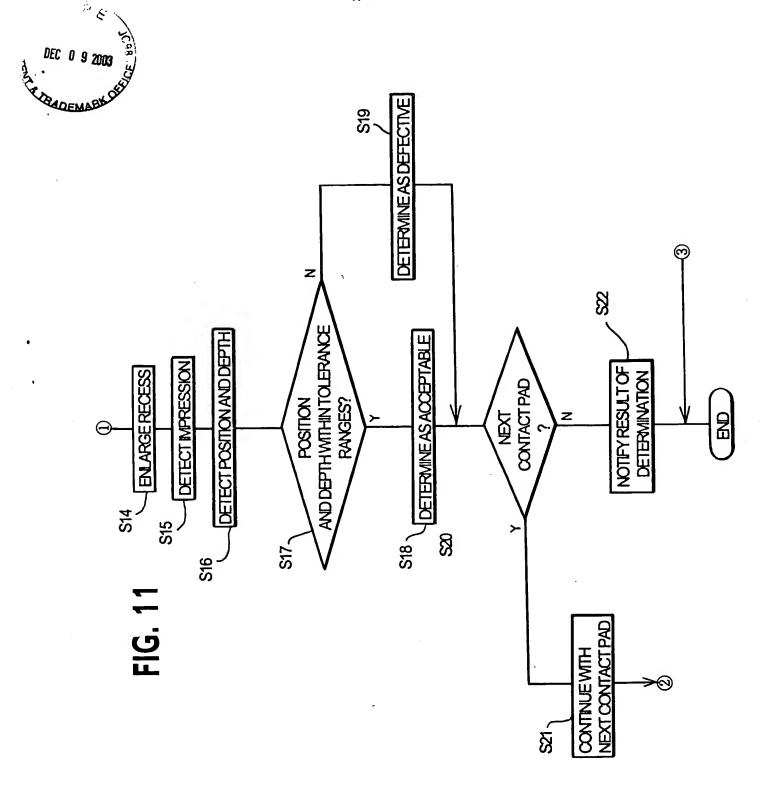
Inventor(s): Yoshihiro SASAKI, et al.

Appl. No.: 10/644,071



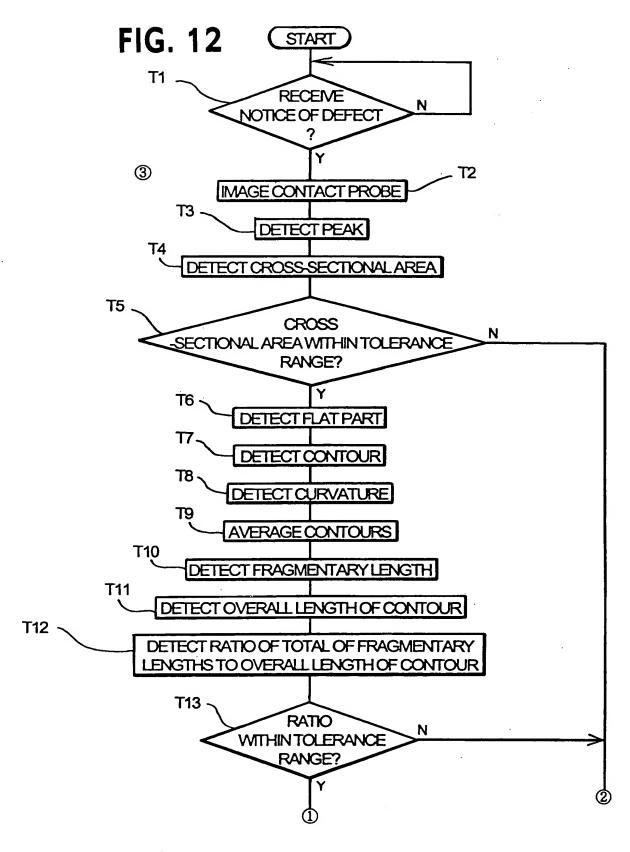


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Inventor(s): Yoshihiro SASAKI, et al. Appl. No.: 10/644,071



## FIG. 13

